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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/062,250	01/31/2002	Oscar A. Zuniga	100111772-1	2277

7590 06/16/2005
HEWLETT-PACKARD COMPANY
Intellectual Property Administration
P.O. Box 272400
Fort Collins, CO 80527-2400

EXAMINER ALAVI, AMIR	
ART UNIT 2621	PAPER NUMBER

DATE MAILED: 06/16/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/062,250

Applicant(s)

ZUNIGA, OSCAR A.

Examiner

Amir Alavi

Art Unit

2621

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) 5-8 is/are withdrawn from consideration.
- 5) ☒ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4 and 9-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 31 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>1/31/02; 7/11/03</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

- Applicant's election without traverse of Group I in the reply filed on 10 January 2005 is acknowledged.
- Claims 5-8 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Group II, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10 January 2005.

Specification

- Applicant is reminded of the proper content of an abstract of the disclosure.
- The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words.
- A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement.

Claim Rejections - 35 USC § 102

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

- Claims 1-4 and 10-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Gahang (USPN 5,767,978).

Regarding claim 1, Gahang discloses: selecting, for each pixel to be thresholded in the image, one threshold among a plurality of thresholds, based on the relative magnitudes of the thresholds (please note, figures 8A and 8B, in correlation to column 16, lines 58-67 and column 17, lines 1-30. As indicated with the threshold data value DT represented by threshold indexes t0-t3, t4-t7, t8-t11 and t12-t15, and for selectively generating one of the received threshold indexes in response to a first selection signal. It is clear that one threshold has been selected among plurality of thresholds, in this regard, the above delta threshold values are of relative magnitudes to each other); and assigning each pixel to one of two classes according to the value of its

intensity relative to the selected threshold for the pixel (please note, figures 2, 8A, and 8B, in correlation to column 6, lines 8-32. As indicated a binary image determining unit 36 compares the threshold value THR outputted from the threshold generator 35 with a data value EP outputted from the edge emphasis post-processing unit 28 in order to determine the image data of a document as the binary data corresponding to the black and white values of each pixel. In this regard, black and white vales of pixels having relative intensity values).

Regarding claim 2, Gahang discloses, selecting among at least one threshold that is dynamic, and a threshold that is constant (please note, figure 2, in correlation to column 18, lines 29-31. As indicated the threshold data THR outputted from the threshold generator 35 is pixel brightness data of 6 bits with the automatic gain control or with a constant value).

Regarding claim 3, Gahang discloses, selecting a threshold corresponding to the highest intensity value among the plurality of thresholds (please note, figures 2, 8A, and 8B, in correlation to column 6, lines 8-32. As indicated a binary image determining unit 36 compares the threshold value THR outputted from the threshold generator 35 with a data value EP outputted from the edge emphasis post-processing unit 28 in order to determine the image data of a document as the binary data corresponding to the black and white values of each pixel. In this regard, black and white vales of pixels having relative intensity values, herein, color white having the highest intensity value).

Regarding claim 4, Gahang discloses, selecting the threshold having the largest magnitude among the plurality of thresholds (please note, figure 8B, in correlation to column 17, lines 1-30. As indicated a given threshold value t_i has a pixel brightness data value of 0 to 63, wherein I is an integer and has a value of 0 to 15. In this, 15 is the largest magnitude among the plurality of thresholds).

Regarding claim 10, arguments analogous to those presented for claim one are applicable, with the addition of a processor. In this regard, please note, figure 1, in correlation to column 16, lines 58-67.

Regarding claim 11, arguments analogous to those presented for claim one are applicable.

Claim Rejections - 35 USC § 102

- The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

- Claim 9 is rejected under 35 U.S.C. 102(e) as being anticipated by Perino (USPN 6,593,961 B1).

Regarding claim 9, Perino discloses: for each pixel of the image, determining a plurality of thresholds (please note, column 5, lines 40-44. As indicated having plurality of threshold, namely, dim threshold and dark threshold); selecting one threshold among the plurality of thresholds (please note, column 5, lines 45-49. As indicated if the pixel intensity value is at or

below the dark threshold level, the pixel is marked as belonging to the dark pixel class. This processing being indicative of selecting one threshold, namely, the dark threshold); and assigning a pixel to one of two classes depending on whether an intensity of the pixel is greater than the selected threshold for the pixel (please note, column 5, lines 49-51. As indicated if the pixel intensity value is above the dark threshold level, the pixel is marked as belonging to the dim pixel class. The pixel was classified as dark or dim).

Other prior art cited

- The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Vaidyanathan et al. (USPN 5,982,944) is pertinent as teaching adaptive vision system using dual thresholding.

O'Gorman (USPN 5,781,658) is pertinent as teaching method of thresholding document images.

Sullivan (USPN 3,665,326) is pertinent as teaching automatic threshold detector with selectable percentage of threshold crossings.

Stephan et al. (USPN 5,878,163) is pertinent as teaching likelihood-based threshold selection for imaging target trackers.

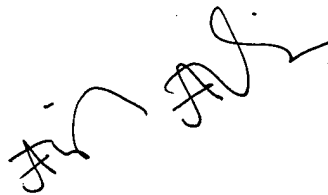
Talukdar et al. (USPN 5,621,815) is pertinent as teaching global threshold method and apparatus.

Gareis et al. (USPN 4,933,869) is pertinent as teaching programmable threshold data detection system.

Oki et al. (USPN 5,454,049) is pertinent as teaching automatic threshold function for machine vision.

Contact Information

- Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amir Alavi whose telephone number is 571-272-7386.
- The examiner can normally be reached on Mon-Thu.. 8:00 am thru 6:30pm.If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Bhavesh Mehta can be reached on 571-272-7453.
- The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.
- For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A handwritten signature in black ink, appearing to be "Amir Alavi", is located in the bottom right corner of the page.